**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (previously presented) An electric contact switching device comprising:

an energizing contact;

a transient current contact; and

a capacitor,

wherein the energizing contact and the transient current contact are connected electrically in parallel with each other, and the energizing contact and the transient current contact can do timely controlled making and breaking operations,

wherein said capacitor is connected in series with said transient current contact, and

wherein the capacity of the capacitor is calculated by transient current analysis using an equivalent circuit with a measured contact resistance between the energizing contacts during its breaking operation, and wherein calculated decreasing time of a contact current to the minimum arc discharge current is shorter than calculated increasing time of a contact voltage to the minimum arc discharge voltage during the breaking operation of the energizing contact.

2. (original) The device according to claim 1, wherein the transient current contact is in making state during the breaking operation of the energizing contact.

3. (currently amended) The device according to claim 1 **[[or 2]]**, wherein an electric resistance or a switch is connected in parallel with the capacitor.

4. (canceled)

5. (currently amended) The device according to claim 1, ~~**2, or 3**~~, wherein the capacitor is characterized so that **[[the]]** a voltage V of the energizing contact is set to the capacity that doesn't exceed the voltage V□Tm/3200 (Tm: melting point temperature of the energizing contact) or V□Tb/3200 (Tb: boiling point temperature of the energizing contact).

6. (currently amended) The device according to claim 1, ~~**2, 3, or 5**~~, further comprising mechanical or electrical making and breaking means for the transient current contact, based on a making and breaking signal of the energizing contact.

7. (currently amended) The device according to claim 1, ~~**3, or 5**~~, comprising a rectification circuit instead of the transient current contact, and rectifying the current that flows into the

capacitor to save electric charge in the capacitor during the breaking operation of the energizing contact.

8. (original) The device according to claim 7, comprising the transient current contact connected in series with the rectification circuit.

9 - 10. (canceled)

11. (currently amended) The device according to claim 1, ~~2, 3, 5, 6, or 8,~~ wherein the energizing contact and the transient current contact consist of semiconductor switches.

12. (currently amended) A power consumption control circuit comprising:

a power supply;

a load; and

the switching device according to claim 1, ~~2, 3, 5, 6, 8, or 11,~~

wherein the load and the power supply are connected, and

wherein the switching device is connected in series with the load, wherein a transient current contact is in making state and a transient current from the power supply flows into a capacitor during a breaking operation of an energizing contact, and wherein a transient current path through the load and an internal

resistance of the power supply suppress the voltage rise at the energizing contact.

13. (canceled)

14. (currently amended) A DC motor which ~~contacts by turns~~ a pair of brushes connected to the power supply are made contact with a pair of commutators provided on both ends of an armature by turning of the armature, ~~respectively,~~ to send the direct current through the armature placed in a magnetic field, and to rotate the armature in response to an electromagnetic force,

wherein, for the commutators to be electrically connected electrically in parallel with each other when contacted to the brush, each commutator has two contacts aligned in the direction of rotation and the capacitor connected in series with the contact at the back side of the direction of rotation, and

wherein the capacity is calculated by transient current analysis using an equivalent circuit, in which a contact between the brush and the commutator is replaced with a measured transient contact resistance, and wherein calculated decreasing time of a contact current to the minimum arc discharge current is shorter than calculated increasing time of a contact voltage during a breaking operation of the brush and the commutator.

15. (previously presented) A pantograph device with a

movable energizing contact to an overhead wiring comprising:

a pair of pantographs; and

a capacitor,

wherein each pantograph is arranged to be connected electrically in parallel with the overhead wiring;

wherein the capacitor is connected in series with one of the pantographs; and

wherein the capacity of the capacitor is calculated by transient current analysis using an equivalent circuit with a measured contact resistance of the energizing contact during its breaking operation, and wherein calculated decreasing time of a contact current to the minimum arc discharge current is shorter than calculated increasing time of a contact voltage to the minimum arc discharge voltage during the breaking operation of the energizing contact.

16. (previously presented) A connector to conduct a socket side energizing line connected to a socket and a plug side energizing line connected to a plug by connecting the socket and the plug, comprising:

a socket side branch line;

a plug side branch line; and

a capacitor,

wherein the socket side energizing line has a socket side energizing contact,

wherein the socket side branch line is branched from the socket side energizing line and has a socket side transient current contact,

wherein the plug side energizing line has a plug side energizing contact,

wherein the plug side branch line is branched from the plug side energizing line and has a plug side transient current contact,

wherein the capacitor is disposed either on the socket side branch line or the plug side branch line,

wherein the capacity of the capacitor is calculated by transient current analysis using an equivalent circuit with a measured contact resistance between the energizing contacts of the socket and the plug during its breaking operation, and wherein calculated decreasing time of a contact current to the minimum arc discharge current is shorter than calculated increasing time of a contact voltage to the minimum arc discharge voltage during the breaking operation of the energizing contacts of the socket and the plug, and comprising a mechanical making and breaking operation of the socket and the plug, and

wherein the socket side energizing contact and the plug side energizing contact are made when the socket is connected to the plug, and the socket side transient current contact and the plug side transient current contact are made when the socket is connected to or removed from the plug, and wherein, while

maintaining the making state, the socket side energizing contact and the plug side energizing contact are broken to remove the socket from the plug.

17. (previously presented) A pulse generation device comprising a rotor with rotating electrodes, contact electrodes, and capacitors,

wherein the rotating electrodes are electrically separated from each other with an isolator, symmetrically arranged for a rotating axis of the rotor,

wherein the rotating electrodes comprise front side electrodes and back side electrodes connected electrically in parallel with each other to a power supply, and the contact electrodes make and break contact with the rotating electrodes during rotation of the rotor and contact the front side electrodes and the back side electrodes step by step,

wherein the capacitors are connected in series with the back side electrodes, and

wherein the capacity of the capacitor is calculated by transient current analysis using an equivalent circuit with a measured contact resistance between the rotating electrodes and the contact electrodes during its breaking operation, and wherein calculated decreasing time of a contact current to the minimum arc discharge current is shorter than calculated increasing time of a contact voltage to the minimum arc discharge voltage during

the breaking operation of energizing contacts.